**Node.js**

* Node.js is an open source, cross-platform JavaScript runtime environment.
* It is not a language, not a framework but runtime.
* Capable of executing JavaScript code outside browser.
* It can execute not only the standard ECMAScript.
* But also new features that made available through C++ binding using V8 engine.

**What you can build with Node.js**

* Traditional website
* Backend services like APIs
* Real time application
* Command line interface tool
* Multiplayer game

**Modules in Node.js**

* A module is an encapsulated and reusable chunk of code that has its own context.

**Types of modules.**

* **Local module**: These are modules created by developers to encapsulate and organize their code into separate files. User-created modules are also known as custom modules.

You can create your own modules by creating separate JavaScript files and then exporting functions, objects, or variables using the module.exports or exports object.

* **Built in module:** These are built-in modules that come with Node.js and can be used without the need for additional installation. Some common core modules include **fs** (File System), **http** (HTTP server and client), **os** (Operating System), **path** (File and Directory Paths), and **util** (Utilities for working with JavaScript objects).
* **Third party module:** Node.js has a vast ecosystem of third-party modules available through the Node Package Manager (NPM). These modules can be installed and used in your Node.js applications to extend their functionality.

You can install third-party modules using the **npm install** command, and then you can require and use them in your code.

**Module scope**

* Each loaded module in Node.js is wrapped with an IIFE that provides private scoping code.
* IIFE allows you to repeat variable or function names without any conflict.

**Module wrapper**

* The module wrapper is the internal mechanism by which Node.js encapsulates the code within a module. It provides the module with its own private scope but is not a type of module itself.

**Es modules**

* At the time node.js was created there was created, there was no build in module system in JavaScript.
* Node.js defaulted to commo.js as a module system
* As of ES2015, JavaScript does have the standardised module system